WHAT IS CLAIMED IS:

1. A method for identifying a set of sequences useful as address/capture tags which comprises the steps of:
   (a) generating a chosen number of single-stranded, random oligonucleotide sequences having a chosen length;
   (b) rejecting all sequences from said chosen number of single-stranded, random oligonucleotide sequences having common subsequences with a subsequence length greater than a chosen number of bases, the remaining sequences forming a first group of sequences;
   (c) rejecting all sequences in said first group of sequences which can form stable hairpins, the remaining sequences forming a second group of sequences; and
   (d) rejecting all sequences in said second group of sequences which can form stable dimers, the remaining sequences forming a third group of sequences; whereby a set of sequences is identified such that the sequences, if synthesized, would hybridize to their respective complements with a high degree of specificity.
2. The method for identifying a set of sequences useful as address/capture tags as described in claim 1, further comprising the step rejecting all reverse complementary sequences from said third group of sequences, the remaining sequences forming a fourth group of sequences;
3. The method for identifying a set of sequences useful as address/capture tags as described in claim 2, further comprising the steps of determining the melting temperature of each of sequence in said fourth group of sequences; and rejecting all sequences that melt below a selected temperature, forming thereby a fifth group of sequences.
4. The method as described in claim 3, further comprising the steps of synthesizing a desired number of the sequences in the fifth group of sequences, and synthesizing the complements thereof.
5. The method for generating a set of address/capture tags as described in claim 3, wherein said selected melting temperature is between 50°C and 70°C.

6. The method for generating a set of address/capture tags as described in claim 5, wherein said selected melting temperature is about 60°C.
7. The method for generating a set of address/capture tags as described in claim 1, further comprising the step of rejecting all runs of bases greater than a chosen number of bases.
8. The method for generating a set of address/capture tags as described in claim 7, wherein the chosen number of bases is 2.
9. The method for generating a set of address/capture tags as described in claim 1, wherein said chosen number of random DNA sequences is computationally generated.
10. The method for generating a set of address/capture tags as described in claim 4, wherein said synthesized sequences are immobilized on identifiable microparticles, each of said synthesized sequences being immobilized on a different identifiable microsphere.
11. The method for generating a set of address/capture tags as described in claim 4, wherein said synthesized complementary sequences are immobilized on identifiable microparticles, each of said synthesized complementary sequences being immobilized on a different identifiable microsphere.
12. The method for generating a set of address/capture tags as described in claim 4, wherein the address/capture tags are used for multiplexed SNP scoring in a flow cytometer assay.
13. A method for generating a set of address/capture tags which comprises the steps of:
    (a) generating a chosen number of single-stranded, random oligonucleotide sequences having a chosen length;
    (b) rejecting all reverse complementary sequences from said chosen number of random oligonucleotide sequences, the remaining sequences forming a first group of sequences;
    (c) rejecting all sequences having runs of bases greater than a chosen number of bases, the remaining bases forming a second group of bases;

(d) rejecting all sequences from said second group of sequences having common subsequences with a subsequence length greater than a chosen number of bases, the remaining sequences forming a third group of sequences;

(e) rejecting all sequences in said third group of sequences which can form stable hairpins, the remaining sequences forming a fourth group of sequences;

(f) rejecting all sequences in said fourth group of sequences which can form stable dimers, the remaining sequences forming a fifth group of sequences;

(g) determining the melting temperature of each of sequence in said fifth group of sequences;

(h) rejecting all sequences that melt below a selected temperature, forming thereby a sixth group of sequences;

(i) synthesizing a desired number of the sequences in said sixth group of sequences; and

(j) synthesizing the complementary sequences of said desired number of sequences, whereby a set of address/capture tags is generated such that the synthesized sequences hybridize to their respective complementary sequences with a high degree of specificity.